



# COMPUTER TOOLS

## for Planning, Conservation & Environmental Protection

Article 7

In an effort to increase awareness of Internet resources available to local governments and citizen planners the Wisconsin Department of Natural Resources (DNR) has initiated a technical assistance program focused on computer tools for planning, conservation, and environmental protection. This program has been made possible by a water quality management grant awarded to the DNR by the U.S. Environmental Protection Agency (EPA).

As part of our technical assistance program we have developed this series of articles. **Each article will highlight a different tool, discuss its possible uses, and offer step-by-step tutorials.** It is our hope that the information provided here will insure that all involved in local planning processes have equal access to valuable information and analysis tools. Gaining access to these free web-based planning tools will assist communities with preliminary selection of alternative approaches to watershed and community planning. When community planners, developers, and citizens have access to similar information they are more readily able to interact and jointly discover possible solutions to land use issues.

This series of articles can be found online at <http://dnr.wi.gov/org/es/science/landuse/CompTools/local.htm>

### Definition of a Tool—Data Access

To help evaluate the available tools, we sort them into three categories—data access, interactive mapping, and predictive modeling. Data access tools give users access to a wide range of shared information. Many of the tools in this category serve as portals allowing users the ability to obtain demographic, geographic, environmental, and other data from multiple sources across the Internet. These portals give the user the ability to create a more comprehensive picture of their local community.

Federal, local, and state agencies invest significant resources collecting and managing data, much of which has value for local environmental protection and management efforts. The information holdings of agencies can include a broad range of data types in a variety of formats. Computer tools organize, catalog, and make these resources accessible, often in downloadable or online formats.

Data tools can be static web sites or searchable databases. Some focus only on a single dataset or data source (e.g., data from a particular land use study) or only on information related to a specific

resource (e.g., endangered and threatened species or historical resources). Other data tools serve more as a clearinghouse, providing access to a variety of datasets and information sources. Some data tools guide users by letting them know how and where to find information rather than actually providing the information.

### Natural Heritage Inventory Online Database

The Wisconsin Natural Heritage Inventory (NHI) Online Database allows users to search the program's database for the status and distribution of endangered resources or to learn what species or natural communities are known to exist within a particular area of interest. The NHI Online Database is intended for information and general planning purposes rather than regulatory decision making.

The NHI is a statewide inventory of known locations and conditions of rare and endangered species. Users need to recognize that parts of the state have not yet been inventoried. Thus an "absence of evidence is not evidence of absence." Nor does the presence of one element imply that other elements were surveyed for but not found. Despite these limitations, the NHI is the state's most comprehensive database on biodiversity and is widely used.

In most cases, locations for species and natural communities (elements) that are tracked in the NHI are available down to a township level. The exception are those elements whose locations are considered to be sensitive (particularly vulnerable to collection or disturbance). Locations of these species or natural communities are generalized down to the county level in order to minimize impacts to them.

### To Use the NHI Online Database

Using your Internet browser, go to [www.dnr.state.wi.us/org/land/er/nhi](http://www.dnr.state.wi.us/org/land/er/nhi)  
Click "Online Database" in the left menu.

The NHI Online Database accommodates two types of queries. The Distribution Search allows you to find the geographical distribution of an element or group of elements. The Geographic Search allows you to find what elements occur in a particular geographic area.

## Distribution Search

This query function is intended to accommodate the user who needs to know the spatial distribution of a single species or natural community or a group of species or natural communities.

Click <Distribution Search> located towards the bottom of the NHI Online Database homepage.

**FIRST:** Select an Element Group from the Element Group list.

**First:**  
Select an Element group

- Invertebrate, terrestrial
- Invertebrate, aquatic
- Invertebrate, all
- Bird, terrestrial

The right-hand window will automatically refresh and display the full list Elements for the selected Element Group.

**SECOND:** Select an individual species or natural community by clicking the radio button to the left of its scientific name in the right window.

**First:**  
Select an Element group

- Invertebrate, terrestrial
- Invertebrate, aquatic
- Invertebrate, all
- Bird, terrestrial

**Second, either...**  
Select a single element at right

AFLEXIA RUBRANURA

**Check one to select a single element**

SCIENTIFIC NAME	COMMON NAME
<input checked="" type="radio"/> AFLEXIA RUBRANURA	RED-TAILED PRAIRIE LEAFHOPPER
<input type="radio"/> ORPHIA CONSPERSA	SPECKLED FANGELAND GRASSHOPPER
<input type="radio"/> ATRYTONOPSIS HIANNA	DUSTED SKIPPER
<input type="radio"/> ATTENUIPYGA VANDUZEEI	A LEAFHOPPER

**THIRD:** Select the desired mapping unit then click <Create Map> to generate a distribution map.

11 counties selected : invertebrate : AFLEXIA RUBRANURA : Data Last Updated: 21April2004

Or, click <Create Tabular Report> to generate data that can be viewed on screen or downloaded. Click <Download> to save the results in a comma separated value (.CSV) file. These files may be opened in most spreadsheets such as Microsoft Excel.

Scientific	Common	Federal	State	SRank	GRank	Date	Total	Factheet
AFLEXIA RUBRANURA	RED-TAILED PRAIRIE LEAFHOPPER	IND	SD	0102	1989	3		<a href="#">View Factheet</a>
<b>Green Lake : INVERTEBRATE</b>								
AFLEXIA RUBRANURA	RED-TAILED PRAIRIE LEAFHOPPER	IND	SD	0102	1989	3		<a href="#">View Factheet</a>
<b>Iowa : INVERTEBRATE</b>								
AFLEXIA RUBRANURA	RED-TAILED PRAIRIE LEAFHOPPER	IND	SD	0102	2000	3		<a href="#">View Factheet</a>
<b>Jefferson : INVERTEBRATE</b>								
AFLEXIA RUBRANURA	RED-TAILED PRAIRIE LEAFHOPPER	IND	SD	0102	1987	3		<a href="#">View Factheet</a>
<b>Kenosha : INVERTEBRATE</b>								
AFLEXIA RUBRANURA	RED-TAILED PRAIRIE LEAFHOPPER	IND	SD	0102	2005	3		<a href="#">View Factheet</a>
<b>Monroe : INVERTEBRATE</b>								
AFLEXIA RUBRANURA	RED-TAILED PRAIRIE LEAFHOPPER	IND	SD	0102	1987	3		<a href="#">View Factheet</a>
<b>Sauk : INVERTEBRATE</b>								
AFLEXIA RUBRANURA	RED-TAILED PRAIRIE LEAFHOPPER	IND	SD	0102	2000	3		<a href="#">View Factheet</a>
<b>Walworth : INVERTEBRATE</b>								
AFLEXIA RUBRANURA	RED-TAILED PRAIRIE LEAFHOPPER	IND	SD	0102	1987	3		<a href="#">View Factheet</a>

Microscopic Database Query      Wisconsin Countywide Query      [Download](#)      [Next](#)

## Geographic Search

This query function is intended to accommodate the user who needs to know all NHI occurrences for a specific mapping unit.

Click <Geographic Search> located towards the bottom of the NHI Online Database homepage.

**FIRST:** Select a mapping unit from the mapping unit dropdown list.

**First:**  
Select a mapping unit

County

**Second:**  
 Click map to select...

**SECOND:** Click on the map to select the geographic area to be queried. **Note:** To query by township first use the "Zoom to..." tools to zoom in on the township of interest.



**THIRD:** Click <View Element Report>.

Wisconsin Natural Resources      Enhanced Resources      Order DB List      Help      Search      Feedback      Legal

Data last updated: 21Apr2004

Connect: Clark

Displaying records 1 to 10 of 57 Element Records

Clark : BIRD

Scientific	Common	Federal	State	SRank	GRank	Date	Total	Factheet
ACOPHER GRULLA	NORTHERN GRAYLE	SDW	SD	0208	05	1989	1	<a href="#">View Factheet</a>
ENDROCKIA GRULLA	GRULLA GRAYLE	IND	SD	04	2001	1		<a href="#">View Factheet</a>
<b>Clark : BIRD</b>								
Scientific	Common	Federal	State	SRank	GRank	Date	Total	Factheet
BRECHINIA GRULLA	NORTHERN GRAYLE	IND	SD	0208	05	2001	1	<a href="#">View Factheet</a>
GRULLA GRULLA	NORTHERN GRAYLE	SDW	SD	0208	05	1984	1	<a href="#">View Factheet</a>
<b>Clark : COMMUNITY</b>								
Scientific	Common	Federal	State	SRank	GRank	Date	Total	Factheet
CENTRAL SANDS PRE-OAK FOREST	CENTRAL SANDS PRE-OAK FOREST	IND	SD	03	1997	1		<a href="#">View Factheet</a>
DRY PRAIRIE	DRY PRAIRIE	IND	SD	0402	1976	1		<a href="#">View Factheet</a>
DRY PRAIRIE	DRY PRAIRIE	IND	SD	03	1976	1		<a href="#">View Factheet</a>
NORTHERN DRY FOREST	NORTHERN DRY FOREST	IND	SD	0007	1976	2		<a href="#">View Factheet</a>
NORTHERN DRY MESC. FOREST	NORTHERN DRY MESC. FOREST	IND	SD	04	1976	2		<a href="#">View Factheet</a>
SOUTHERN DRY MESC. FOREST	SOUTHERN DRY MESC. FOREST	IND	SD	04	1976	2		<a href="#">View Factheet</a>

[View Search Distribution Query](#)      [View Search Geographic Query](#)      [Download](#)      [Next](#)

Click <Download> to save the results in a comma separated value (.CSV) file. These files may be opened in most spreadsheets such as Microsoft Excel.

## For More Information:

www.dnr.state.wi.us/org/es/science/landuse  
WDNR's land use website



Midwest Spatial Decision  
Support System Partnership

www.epa.gov/waterspace

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Let us know what you think of this article series. Email your thoughts to: robert.welch@dnr.state.wi.us